# Engineering Interpretations

### **Building Site Development**

Soil properties influence development of building sites, including the selection of the site, the design of the structure, construction, post construction performance, and maintenance. Soil limitation ratings of slight, moderate, and severe are given for shallow excavations, dwellings with and without basements, small commercial buildings, local roads and streets, and lawns, landscaping, and golf fairways.

#### Shallow Excavations

Shallow excavations are trenches or holes dug in the soil to a maximum depth of 5 or 6 feet. They are used for pipelines, sewer lines, telephone and power transmission lines, basements, open ditches, and cemeteries. The ratings are based on the soil properties that influence ease of digging and resistance to sloughing.

### **Dwellings With or Without Basements**

These are single-family houses of three stories or less. The foundation is assumed to be spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or the depth of maximum frost penetration, whichever is deeper, for houses without basements, or at a depth of 7 feet if a basement is constructed. The ratings are based on properties affecting soil strength and settlement under a load, and those that affect excavation and construction costs.

### Small Commercial Buildings

Limitation ratings are given for the undisturbed soil on which small commercial buildings of less than three stories without basements are built. The foundation is assumed to be placed on spread footings of reinforced concrete at a depth of 2 feet or the depth of maximum frost penetration, whichever is deeper.

### Local Roads and Streets

Limitation ratings are given for the use of soils for construction of improved local roads and streets that have all-weather surfacing, commonly of asphalt, gravel with binder in it, or concrete, and that are expected to carry automobile traffic all year. These roads and streets are graded to shed water, and conventional drainage measures are provided. With the probable exception of the hard surface, roads and streets are built mainly from the soil at hand.

## Lawns, Landscaping, and Golf Fairways

The soils are rated for their use in establishing and maintaining turf for lawns and golf fairways and ornamental trees and shrubs for residential type landscaping. The ratings are based on the use of soil material at the location with some land smoothing. Irrigation may or may not be needed and is not a criterion in rating. Traps, trees, roughs, and greens are not considered as part of the golf fairway. The properties considered are those listed that affect plant growth and trafficability after vegetation is established.

This subsection includes:

• (a) Building Site Development

#### Building Site Development

Map symbol and soil name	Dwellings without base	ements	Dwellings with basem	ents	Small commercial buil	dings	Local roads and str	eets	Lawns and landscap	ping
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AkB: Askew	Moderately limited  -wetness  (moderately limited)  -shrink-swell  (moderately limited)	0.45	  Very limited  ~wetness   (very limited)  ~shrink-swell   (moderately limited)	0.45	  Moderately limited  ~shrink-swell   (moderately limited)  ~slope   (slightly limited)  ~wetness   (slightly limited)	1	(moderately limited)	0.78	  Slightly limited  ~wetness   (slightly limited)	0.13
AsB: Askew	Moderately limited  ~wetness   (moderately limited)  ~shrink-swell   (moderately limited)	0.45	  Very limited  ~wetness   (very limited)  ~shrink-swell   (moderately limited)	  1.00    0.45 	   Moderately limited   ~shrink-swell   (moderately limited)   ~slope   (slightly limited)   ~wetness   (slightly limited)	0.15	  Limited  ~low strength   (limited)  ~shrink-swell   (moderately limited)  ~wetness   (slightly limited)	0.78	  Slightly limited  ~wetness   (slightly limited)	0.13
AsB2: Askew	Moderately limited  -wetness  (moderately limited)  -shrink-swell  (moderately limited)	0.45	  Very limited  ~wetness   (very limited)  ~shrink-swell   (moderately limited)	  1.00    0.45 	   Moderately limited   ~shrink-swell   (moderately limited)   ~slope   (slightly limited)   ~wetness   (slightly limited)	0.15	  Limited  ~low strength   (limited)  ~shrink-swell   (moderately limited)  ~wetness   (slightly limited)	  0.78    0.45    0.13	  Slightly limited  ~wetness   (slightly limited) 	0.13
BaB: Barco	  - Moderately limited  ~shrink-swell (moderately limited)	    0.45       	  Limited  ~depth to bedrock  (limited)  ~shrink-swell  (moderately limited)  ~soft bedrock <40"  (slightly limited)	  0.67  0.41  0.15	  Moderately limited  ~shrink-swell   (moderately limited)  ~slope   (slightly limited)	  0.45    0.15 	  Limited  ~low strength   (limited)  ~shrink-swell   (moderately limited)	0.45	  Slightly limited  ~depth to bedrock  (slightly limited)  ~too acid  (slightly limited)	0.18

#### Building Site Development

Map symbol and soil name	Dwellings without base	ements	Dwellings with basem	ents	Small commercial build	dings	Local roads and stro	eets	Lawns and landscap	ping
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value   	Rating class and limiting features	Value	Rating class and limiting features	Value   _
BaB2: Barco	  - Moderately limited  ~shrink-swell   (moderately limited)	      0.45     	Limited  -depth to bedrock   (limited)  -shrink-swell   (moderately limited)  -soft bedrock <40"   (slightly limited)	      0.67    0.45    0.15	  Moderately limited  ~shrink-swell  (moderately limited)  ~slope  (slightly limited)	      0.45    0.15	  Limited  ~low strength  (limited)  ~shrink-swell  (moderately limited)	İ	  Slightly limited  ~depth to bedrock   (slightly limited)  ~too acid   (slightly limited)	0.18
BcB: Barco	  - Moderately limited  ~shrink-swell   (moderately limited)	      0.45     	Limited  ~depth to bedrock  (limited)  ~shrink-swell  (moderately limited)  ~soft bedrock <40"  (slightly limited)	    0.67    0.41    0.15	   Moderately limited   ~shrink-swell   (moderately limited)   ~slope   (slightly limited)	    0.45    0.15	Limited  -low strength   (limited)  -shrink-swell   (moderately limited)	    0.78    0.45	  Slightly limited  ~depth to bedrock  (slightly limited)  ~too acid  (slightly limited)	0.18
BcB2: Barco	1 -	    0.45       	Limited  -depth to bedrock  (limited)  -shrink-swell  (moderately limited)  -soft bedrock <40"  (slightly limited)	  0.67    0.45    0.15	   Moderately limited  ~shrink-swell   (moderately limited)  ~slope   (slightly limited)	j	  Limited  ~low strength   (limited)  ~shrink-swell   (moderately limited)	j	  Slightly limited  ~depth to bedrock   (slightly limited)  ~too acid   (slightly limited)	0.18
BdB: Barden	  -  Very limited  ~shrink-swell   (very limited)  ~wetness   (moderately limited)	  1.00    0.51 	  Very limited  ~wetness   (very limited)  ~shrink-swell   (very limited)	  1.00    1.00 	  Very limited  ~shrink-swell   (very limited)  ~wetness   (slightly limited)	  1.00    0.13	  Very limited  ~low strength   (very limited)  ~shrink-swell   (very limited)  ~wetness   (slightly limited)	  1.00    1.00    0.13	  Slightly limited  ~wetness   (slightly limited)  ~too acid   (slightly limited)	0.13

#### Building Site Development

Map symbol and soil name	Dwellings without base	ements	Dwellings with baseme	ents	Small commercial build	dings	Local roads and stro	eets	Lawns and landscap	ing
	Rating class and limiting features	Value	Rating class and limiting features	Value   	Rating class and limiting features	Value	Rating class and limiting features	Value   	Rating class and limiting features	Value
BdB2: Barden	  Very limited  ~shrink-swell   (very limited)  ~wetness   (moderately limited)	      1.00    0.51	  Very limited  ~wetness   (very limited)  ~shrink-swell   (very limited)	      1.00    1.00	  Very limited  ~shrink-swell  (very limited)  ~wetness  (slightly limited)	    1.00    0.13	  Very limited  ~low strength  (very limited)  ~shrink-swell  (very limited)  ~wetness  (slightly limited)	İ	  Slightly limited  ~wetness  (slightly limited)  ~too acid  (slightly limited)	0.13
BoB: Bolivar	   Moderately limited  ~shrink-swell   (moderately limited) 	    0.45     	  Limited  ~depth to bedrock   (limited)  ~soft bedrock <40"   (limited)  ~shrink-swell   (moderately limited)	0.82	  Moderately limited  ~shrink-swell   (moderately limited)  ~slope   (slightly limited)	  0.45    0.15 	  Very limited  ~low strength   (very limited)  ~shrink-swell   (moderately limited)	  1.00    0.45 	  Moderately limited  ~depth to bedrock   (moderately limited)	    0.42     
BoB2: Bolivar	  Moderately limited  ~shrink-swell   (moderately limited)	    0.45     	  Limited  ~depth to bedrock   (limited)  ~soft bedrock <40"   (limited)  ~shrink-swell   (moderately limited)	  0.64    0.45	  Moderately limited  ~shrink-swell   (moderately limited)  ~slope   (slightly limited)	  0.45    0.15 	  Very limited  ~low strength   (very limited)  ~shrink-swell   (moderately limited)	  1.00    0.45 	  Moderately limited  ~depth to bedrock   (moderately limited)	    0.42       
Br: Barden	1 -	  1.00    0.51 	  Very limited  ~wetness   (very limited)  ~shrink-swell   (very limited)	  1.00    1.00	  Very limited  ~shrink-swell   (very limited)  ~slope   (slightly limited)  ~wetness   (slightly limited)	İ	  Very limited  ~low strength   (very limited)  ~shrink-swell   (very limited)  ~wetness   (slightly limited)	İ	  Slightly limited  ~wetness   (slightly limited)  ~too acid   (slightly limited)	0.13

#### Building Site Development

Map symbol and soil name	  Dwellings without base 	ements	   Dwellings with baseme   	ents	  Small commercial build 	dings	Local roads and str	eets	   Lawns and landscap 	ing
	Rating class and limiting features	Value 	Rating class and limiting features	Value	Rating class and limiting features	Value   	Rating class and limiting features	Value   	Rating class and limiting features	Value
Br: (cont)										
Hepler	Very limited  ~flooding   (very limited)  ~wetness   (moderately limited)  ~shrink-swell   (moderately limited)		(very limited)	1	Very limited  ~flooding   (very limited)  ~shrink-swell   (moderately limited)  ~wetness   (slightly limited)	  1.00    0.45    0.13	(very limited)	  1.00    1.00    0.45	Moderately limited  -flooding   (moderately limited)  -wetness   (slightly limited)	  0.60    0.13 
Radley	Very limited  ~flooding   (very limited)	    1.00   	  Very limited  ~flooding   (very limited)	    1.00   	  Very limited  ~flooding   (very limited) 	    1.00   	  Very limited  ~flooding   (very limited)  ~low strength   (very limited)	  1.00    1.00	  Very limited  ~flooding   (very limited)	  1.00   
BsB: Bronaugh	   Moderately limited  ~shrink-swell   (moderately limited)	    0.45   	  Moderately limited  ~shrink-swell   (moderately limited) 		  Moderately limited  ~shrink-swell   (moderately limited)  ~slope   (slightly limited)	    0.45    0.15	(very limited)	    1.00    0.45	  Not limited   	
Ca: Carytown	  Very limited  ~wetness   (very limited)  ~shrink-swell   (very limited)	1.00	(very limited)	  1.00    1.00	  Very limited  ~wetness   (very limited)  ~shrink-swell   (very limited)	  1.00    1.00 	  Very limited  ~low strength   (very limited)  ~wetness   (very limited)  ~shrink-swell   (very limited)	  1.00    1.00    1.00	  very limited  ~excess sodium  (very limited) 	1.00

#### Building Site Development

Map symbol and soil name	  Dwellings without base 	ements	Dwellings with basem	ents	  Small commercial buil 	ldings	Local roads and str	reets	Lawns and landsca	ping
	Rating class and limiting features	Value   	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ce: Cherokee	  Very limited  ~shrink-swell   (very limited)  ~wetness   (very limited)	1.00	  Very limited  ~wetness   (very limited)  ~shrink-swell   (very limited)		  Very limited  ~shrink-swell   (very limited)  ~wetness   (limited)	1.00	  Very limited  ~low strength   (very limited)  ~shrink-swell   (very limited)  ~wetness   (limited)	1.00	  Limited  ~wetness   (limited)	0.99
Cf: Cleora	  Very limited  ~flooding   (very limited)	1.00	  Very limited  ~flooding   (very limited) 	1.00	  Very limited  ~flooding   (very limited)	1.00	  Very limited  ~flooding   (very limited)	1.00	  Very limited  ~flooding   (very limited)  ~too acid   (slightly limited)	1.00
CoB: Collinsville	  Very limited  ~hard bedrock <20"   (very limited)	1.00	  Very limited  ~hard bedrock <40"   (very limited) 	1.00	  Very limited  ~hard bedrock <20"   (very limited)  ~slope   (slightly limited)	1.00	  Very limited  ~hard bedrock <20"   (very limited)	1.00	  Very limited  ~shallow to bedrock   (very limited)  ~droughty   (very limited)	1.00
CoD: Collinsville	  Very limited  ~hard bedrock <20"   (very limited)  ~slope   (moderately limited)	1.00	  Very limited  ~hard bedrock <40"   (very limited)  ~slope   (moderately limited)	  1.00    0.60	  Very limited  ~hard bedrock <20"   (very limited)  ~slope   (very limited)	1.00	  Very limited  ~hard bedrock <20"   (very limited)  ~slope   (slightly limited)	1.00	  Very limited  ~shallow to bedrock   (very limited)  ~droughty   (very limited)  ~slope   (slightly limited)	1.00
CrD: Collinsville	  Very limited  ~hard bedrock <20"   (very limited)  ~slope   (moderately limited)	    1.00    0.30	Very limited  -hard bedrock <40"   (very limited)  -slope   (moderately limited)	1.00	  Very limited  ~hard bedrock <20"   (very limited)  ~slope   (limited)	1.00	  Very limited  ~hard bedrock <20"   (very limited) 	1.00	Very limited	1.00

#### Building Site Development

Map symbol and soil name	Dwellings without base	ements	Dwellings with basem	ents	Small commercial buil	dings	Local roads and str	eets	Lawns and landscap	oing
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
CsB: Creldon	- Limited  ~wetness   (limited)  ~shrink-swell   (moderately limited)	      0.85    0.45	     Very limited   ~wetness   (very limited)   ~shrink-swell   (moderately limited)	        1.00    0.45	   Moderately limited  ~wetness   (moderately limited)  ~shrink-swell   (moderately limited)	0.49	 	      1.00    0.49    0.45	   Moderately limited   ~wetness   (moderately limited)   ~too acid   (slightly limited)   ~droughty   (slightly limited)	0.49
CsB2: Creldon	Limited  ~wetness   (limited)  ~shrink-swell   (moderately limited)	    0.85    0.45	  Very limited  ~wetness   (very limited)  ~shrink-swell   (moderately limited)	    1.00    0.45	  Moderately limited  ~wetness   (moderately limited)  ~shrink-swell   (moderately limited)	0.49	  Very limited  ~low strength   (very limited)  ~wetness   (moderately limited)  ~shrink-swell   (moderately limited)	  1.00    0.49  0.45	   Moderately limited   ~wetness   (moderately limited)   ~too acid   (slightly limited)   ~droughty   (slightly limited)	0.49
CtB: Creldon	Limited  ~wetness   (limited)  ~shrink-swell   (moderately limited)	  0.85    0.45	  Very limited  ~wetness   (very limited)  ~shrink-swell   (moderately limited)	  1.00    0.36	  Moderately limited  ~wetness   (moderately limited)  ~shrink-swell   (moderately limited)	  0.49    0.45 	  Very limited  ~low strength   (very limited)  ~wetness   (moderately limited)  ~shrink-swell   (moderately limited)	  1.00    0.49    0.45	  Moderately limited  ~wetness   (moderately limited)  ~too acid   (slightly limited)	0.49
HcB: Hector	- Very limited  ~hard bedrock <20"  (very limited)	      1.00   	  Very limited  ~hard bedrock <40"   (very limited) 	    1.00   	  Very limited  ~hard bedrock <20"   (very limited)  ~slope   (slightly limited)	  1.00    0.15	  Very limited  ~hard bedrock <20"   (very limited) 	      1.00   	  Very limited  ~shallow to bedrock   (very limited)  ~droughty   (very limited)	1.00

#### Building Site Development

Map symbol and soil name	Dwellings without base	ements	Dwellings with basem	ents	Small commercial buil	dings	Local roads and str	eets	Lawns and landscap	ping
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value   	Rating class and limiting features	Value	Rating class and limiting features	Value
HcD: Hector	  Very limited  ~hard bedrock <20"  (very limited)  ~slope  (moderately limited)	      1.00    0.60	  Very limited  ~hard bedrock <40"  (very limited)  ~slope  (moderately limited)		  Very limited  ~hard bedrock <20"  (very limited)  ~slope  (very limited)	1.00	  Very limited  ~hard bedrock <20"  (very limited)  ~slope  (slightly limited)	      1.00    0.16	  Very limited  ~shallow to bedrock  (very limited)  ~droughty  (very limited)  ~slope  (slightly limited)	1.00
HeD: Hector	  Very limited  ~hard bedrock <20"   (very limited)  ~slope   (moderately limited)	  1.00    0.30	  Very limited  ~hard bedrock <40"   (very limited)  ~slope   (moderately limited)	İ	  Very limited  ~hard bedrock <20"   (very limited)  ~slope   (limited)	  1.00    0.99	  Very limited  ~hard bedrock <20"   (very limited) 	    1.00     	  Very limited  ~shallow to bedrock   (very limited)  ~droughty   (very limited)	1.00
HeE: Hector	  Very limited  ~hard bedrock <20"   (very limited)  ~slope   (very limited)	    1.00    1.00 	  Very limited  ~hard bedrock <40"   (very limited)  ~slope   (very limited)	  1.00    1.00 	  Very limited  ~hard bedrock <20"   (very limited)  ~slope   (very limited)	1.00	  Very limited  ~hard bedrock <20"   (very limited)  ~slope   (very limited)	    1.00    1.00 	  Very limited  ~shallow to bedrock   (very limited)  ~droughty   (very limited)  ~slope   (very limited)	1.00
Hm: Hepler	  Very limited  ~flooding   (very limited)  ~wetness   (moderately limited)  ~shrink-swell   (moderately limited)	  1.00    0.51    0.45	  Very limited  ~flooding   (very limited)  ~wetness   (very limited)  ~shrink-swell   (slightly limited)	  1.00    1.00    0.27	(moderately limited)	0.45	  Very limited  ~low strength   (very limited)  ~flooding   (very limited)  ~shrink-swell   (moderately limited)	  1.00    1.00    0.45	  Moderately limited  ~flooding  (moderately limited  ~wetness  (slightly limited)	0.60

#### Building Site Development

Map symbol and soil name	Dwellings without base	ements	Dwellings with basem	ents	Small commercial build	dings	Local roads and str	eets	Lawns and landscap	oing
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
нр: Hepler	  Very limited  ~flooding   (very limited)  ~wetness   (moderately limited)	    1.00    0.51	  Very limited  ~flooding   (very limited)  ~wetness   (very limited)  ~shrink-swell   (slightly limited)	1.00	  Very limited  ~flooding   (very limited)  ~wetness   (slightly limited)	j	  Very limited  ~flooding   (very limited)  ~low strength   (slightly limited)  ~wetness   (slightly limited)	   1.00   0.22   0.13	  Moderately limited  ~flooding   (moderately limited)  ~wetness   (slightly limited)	0.60
Hr: Hepler	Very limited   ~flooding   (very limited)   ~wetness   (moderately limited)   ~shrink-swell   (moderately limited)	  1.00    0.51    0.45	Very limited -flooding (very limited) -wetness (very limited) -shrink-swell (slightly limited)	1.00	  Very limited  ~flooding   (very limited)  ~shrink-swell   (moderately limited)  ~wetness   (slightly limited)	0.45	(very limited)	  1.00    1.00    0.45	  Moderately limited  ~flooding   (moderately limited)  ~wetness   (slightly limited)	0.60
Radley	  Very limited  ~flooding   (very limited)	  1.00   	  very limited  ~flooding   (very limited)	1.00	  very limited  ~flooding   (very limited) 	  1.00   	  very limited  ~flooding   (very limited)  ~low strength   (very limited)	  1.00    1.00	  Very limited  ~flooding   (very limited)	1.00
KeC: Keeno	   Moderately limited   ~wetness   (moderately limited) 	    0.59       	  Very limited  ~wetness   (very limited)	1.00	  Limited  ~slope   (limited)  ~wetness   (slightly limited)	0.68	  Slightly limited  ~wetness   (slightly limited)	    0.28       	   Moderately limited   ~small stones   (moderately limited)   ~large stones   (moderately limited)   ~wetness   (slightly limited)	0.30

#### Building Site Development

Map symbol and soil name	  Dwellings without base 	ements	   Dwellings with basem   	ents	  Small commercial bui   	ldings	Local roads and str	eets	Lawns and landscap	ing
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
KnC: Keeno	  Moderately limited  ~wetness   (moderately limited) 	      0.59     	  Very limited  ~wetness   (very limited)	      1.00       	Limited  ~slope   (limited)  ~wetness   (slightly limited)	0.68	  Slightly limited  ~wetness   (slightly limited)	      0.28     	   Moderately limited  ~small stones   (moderately limited)  ~large stones   (moderately limited)  ~wetness   (slightly limited)	0.44
La: Lanton	  Very limited  ~flooding   (very limited)  ~wetness   (limited)	  1.00    0.99 	  Very limited  ~flooding   (very limited)  ~wetness   (very limited)	1.00	  Very limited  ~flooding   (very limited)  ~wetness   (limited)	1.00	(very limited)	1.00	  Very limited  ~flooding   (very limited)  ~wetness   (limited)	1.00
Ld: Lanton	  Very limited  ~flooding   (very limited)  ~wetness   (limited)	  1.00    0.99	  Very limited  ~flooding   (very limited)  ~wetness   (very limited)	1.00	  Very limited  ~flooding   (very limited)  ~wetness   (limited)	1.00	  Very limited  ~flooding   (very limited)  ~low strength   (very limited)  ~wetness   (limited)	1.00	  Very limited  ~flooding   (very limited)  ~wetness   (limited)	1.00
Verdigris	1 -	    1.00 	  Very limited  ~flooding   (very limited) 	    1.00 	  Very limited  ~flooding   (very limited) 	1.00	  Very limited  ~flooding   (very limited) 	    1.00 	  Very limited  ~flooding   (very limited) 	    1.00 

#### Building Site Development

Map symbol and soil name	  Dwellings without base 	ements	Dwellings with baseme	ents	  Small commercial build 	dings	   Local roads and str 	eets	   Lawns and landscap 	ing
	Rating class and limiting features	Value	Rating class and limiting features	Value   	Rating class and limiting features	Value	Rating class and limiting features	Value   	Rating class and limiting features	Value
LeB: Lebanon	  Limited  ~wetness   (limited)  ~shrink-swell   (moderately limited)	      0.71    0.45	  Very limited  ~wetness   (very limited)  ~shrink-swell   (moderately limited)	      1.00    0.45	  Moderately limited  ~shrink-swell   (moderately limited)  ~wetness   (moderately limited)  ~slope   (slightly limited)	0.45	  Very limited  ~low strength   (very limited)  ~shrink-swell   (moderately limited)  ~wetness   (moderately limited)	   1.00   0.45   0.39	  Moderately limited  ~wetness   (moderately limited)	0.39
LiB: Liberal	  Very limited  ~shrink-swell   (very limited)  ~wetness   (moderately limited)	    1.00    0.45	(very limited)	    1.00    1.00	  Very limited  ~shrink-swell   (very limited)  ~slope   (slightly limited)	    1.00    0.15	  Very limited  ~shrink-swell   (very limited) 	    1.00   	  Slightly limited  ~too acid   (slightly limited)	0.30
LmC2: Liberal	  Very limited  ~shrink-swell   (very limited)  ~wetness   (moderately limited)	  1.00    0.45	  Very limited  ~shrink-swell   (very limited)  ~wetness   (very limited)	    1.00    1.00	  Very limited  ~shrink-swell   (very limited)  ~slope   (limited)	  1.00    0.68	  Very limited  ~shrink-swell   (very limited)	    1.00   	  Slightly limited  ~too acid   (slightly limited)	0.30
LoD: Liberal	  Very limited  ~shrink-swell   (very limited)  ~wetness   (moderately limited)  ~slope   (moderately limited)	0.30	(very limited)  ~wetness   (very limited)	    1.00    1.00    0.30	  Very limited  ~shrink-swell   (very limited)  ~slope   (limited)	    1.00    0.99   	  Very limited  ~shrink-swell   (very limited) 	    1.00     	  Slightly limited  ~too acid   (slightly limited) 	0.30

#### Building Site Development

Map symbol and soil name	  Dwellings without base   	ements	   Dwellings with basem   	ents	  Small commercial build 	dings	   Local roads and stro 	eets	   Lawns and landscar 	ping
	Rating class and limiting features	Value   	Rating class and limiting features	Value   	Rating class and limiting features	Value   	Rating class and limiting features	Value   	Rating class and limiting features	Value
LoD: (cont) Barco	  Moderately limited  ~shrink-swell   (moderately limited)  ~slope   (moderately limited)	0.45	(limited)  ~shrink-swell   (moderately limited)	0.67    0.41    0.30	Limited  ~slope   (limited)  ~shrink-swell   (moderately limited)	  0.99    0.45 	Limited  -low strength   (limited)  -shrink-swell   (moderately limited)	  0.78    0.45 	  Slightly limited  ~depth to bedrock  (slightly limited)  ~too acid  (slightly limited)	0.18
Collinsville	  Very limited  ~hard bedrock <20"   (very limited)  ~slope   (moderately limited)	  1.00    0.30	  Very limited  ~hard bedrock <40"   (very limited)  ~slope   (moderately limited)	0.30	  Very limited  ~hard bedrock <20"   (very limited)  ~slope   (limited)	  1.00    0.99	  Very limited  ~hard bedrock <20"   (very limited) 	    1.00   	  Very limited  ~shallow to bedrock  (very limited)  ~droughty  (very limited)	1.00
Mp: Kanima	  Very limited  ~slope   (very limited) 	    1.00       	  Very limited  ~slope   (very limited)   	    1.00       	  Very limited  ~slope   (very limited)   	    1.00       	  Very limited  ~slope   (very limited)   	    1.00       	  Very limited  ~large stones >30%   (very limited)  ~slope   (very limited)  ~droughty   (limited)	1.00
NeB: Newtonia	  Moderately limited  ~shrink-swell   (moderately limited)   	  0.45     	  Moderately limited  ~shrink-swell   (moderately limited)   	0.45	  Moderately limited  ~shrink-swell   (moderately limited)   	  0.45     	  Very limited  ~low strength   (very limited)  ~shrink-swell   (moderately limited)	  1.00    0.45	  Not limited       	

#### Building Site Development

Map symbol and soil name	Dwellings without bas	sements	Dwellings with basem	ents	Small commercial bui	ldings	Local roads and st	reets	Lawns and landscap	oing
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value   _	Rating class and limiting features	Value   _	Rating class and limiting features	Value
NhC: Nixa	  - Not limited		  Not limited   		  Limited  ~slope   (limited)	0.68	  Not limited   		  Moderately limited  ~small stones   (moderately limited)  ~large stones   (slightly limited)  ~too acid   (slightly limited)	0.46
PaA: Parsons	- Very limited ->shrink-swell (very limited) ->wetness (very limited)	1.00	  Very limited  ~wetness  (very limited)  ~shrink-swell  (very limited)	1.00	  Very limited  ~shrink-swell   (very limited)  ~wetness   (limited)	1.00	  Very limited  ~low strength   (very limited)  ~shrink-swell   (very limited)  ~wetness   (limited)		  Limited  ~wetness   (limited)  ~too acid   (slightly limited)	0.99
PaB: Parsons	Very limited  ~shrink-swell   (very limited)  ~wetness   (very limited)	1.00	  Very limited  ~wetness   (very limited)  ~shrink-swell   (very limited)	  1.00    1.00	  Very limited  ~shrink-swell   (very limited)  ~wetness   (limited)	1.00	  Very limited  ~low strength   (very limited)  ~shrink-swell   (very limited)  ~wetness   (limited)	j	  Limited  ~wetness   (limited)  ~too acid   (slightly limited)	0.99
PaB2: Parsons	Very limited  -shrink-swell  (very limited)  -wetness  (very limited)	1.00	  very limited  ~wetness  (very limited)  ~shrink-swell  (very limited)	1.00	  Very limited  ~shrink-swell   (very limited)  ~wetness   (limited)	j	  Very limited  ~low strength  (very limited)  ~shrink-swell  (very limited)  ~wetness  (limited)		  Limited  ~wetness   (limited)  ~too acid   (slightly limited)	0.99

#### Building Site Development

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings		Local roads and streets		Lawns and landscaping	
	Rating class and limiting features	Value   	Rating class and limiting features	Value    -	Rating class and limiting features	Value    -	Rating class and limiting features	Value    -	Rating class and limiting features	Value
Rv: Verdigris	  Very limited  ~flooding   (very limited)	      1.00	    Very limited  ~flooding   (very limited)	1.00	    Very limited  ~flooding   (very limited)	1.00	  Very limited  ~flooding   (very limited)	1.00	    Very limited  ~flooding   (very limited)	1.00
Radley	  Very limited  ~flooding   (very limited)	    1.00   	  Very limited  ~flooding   (very limited) 	1.00	  Very limited  ~flooding   (very limited)	1.00	  Very limited  ~flooding   (very limited)  ~low strength   (very limited)	1.00	  Very limited  ~flooding   (very limited) 	1.00
SuA: Summit	  Very limited  ~shrink-swell   (very limited)  ~wetness   (moderately limited)	    1.00    0.45	  Very limited  ~shrink-swell  (very limited)  ~wetness  (very limited)	1.00	  Very limited  ~shrink-swell   (very limited) 	1.00	  Very limited  ~shrink-swell  (very limited)  ~low strength  (very limited)	1.00	  Moderately limited  ~too clayey   (moderately limited)   	0.60
SuB: Summit	  Very limited  ~shrink-swell   (very limited)  ~wetness   (moderately limited)	    1.00    0.45	  Very limited  ~shrink-swell   (very limited)  ~wetness   (very limited)	j	  Very limited  ~shrink-swell  (very limited)  ~slope  (slightly limited)	1.00	  Very limited  ~shrink-swell  (very limited)  ~low strength  (very limited)	1.00	  Moderately limited  ~too clayey   (moderately limited)	    0.60   
w: Water	  Not rated   	         	  Not rated  - 		  Not rated 		  Not rated 		  Not rated   	